



Global Scientific JOURNALS

GSJ: Volume 11, Issue 1, January 2023, Online: ISSN 2320-9186
www.globalscientificjournal.com

NEEDLE STICK INJURIES AS AN OCCUPATIONAL HAZARD AMONG NURSES IN JINNAH HOSPITAL, LAHORE.

By

Miss Iram Aslam

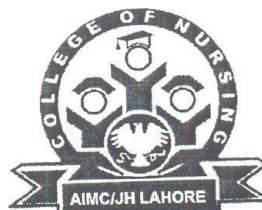
Miss Riddah Razzaq

Miss Shabana Sarwar

A thesis submitted to College of Nursing, AIMC Lahore Pakistan in partial fulfillment of the
Requirement for the degree of

BACHELOR OF SCIENCE IN NURSING

SESSION 2014-2018



COLLEGE OF NURSING
ALLAMA IQBAL MEDICAL COLLEGE
LAHORE-PAKISTAN
NEEDLE STICK INJURIES AS AN OCCUPATIONAL HAZARD AMONG NURSES IN
JINNAH HOSPITAL, LAHORE.

By

Miss Iram Aslam

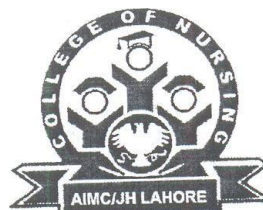
Miss Riddah Razzaq

Miss Shabana Sarwar

A thesis submitted to College of Nursing, AIMC Lahore Pakistan in partial fulfillment of the
Requirement for the degree of

BACHELOR OF SCIENCE IN NURSING

SESSION 2014-2018



SUPERVISOR:

MRS. ZUMARD KHURSHEED
VICE PRINCIPAL
COLLEGE OF NURSING
ALLAMA IQBAL MEDICAL COLLEGE
LAHORE-PAKISTAN

Key Words

Nurses

Needle stick injuries

Prevalence

Compliance

Non-compliance

Human immune-deficiency virus

Blood-borne pathogens

Occupational exposure



List of abbreviations

NSI - Needle Stick Injury

HBV - Hepatitis B Virus

HCV - Hepatitis C Virus

HIV - Human Immunodeficiency Virus

PEP - Post Exposure Prophylaxis

PPE - Personal Protective Equipment

WHO - World Health Organization

DEDICATION

We dedicate this work to our beloved parents who stood by us during very difficult times...

© GSJ

Acknowledgement

This research was supported by Mrs. Zumard Khursheed college of nursing AIMC. Without her assistance and dedicated involvement in every step throughout the process, this paper would have never been accomplished. We would like to thank you for your support and understanding over these past four years.

We would also like to show gratitude to our respected Mam Farzana Malik. Her teaching style and enthusiasm for the topic made a strong impression on us and we have always carried positive memories of her class with us. She raised many precious points in our discussion, we hope that we have managed to address several of them here.

We would like to thank Sir Ali and Sir Hafiz Sahib. Much of the analysis presented is owed to them. They assisted us with the statistical analysis in this dissertation and was very patient with our knowledge gaps in the area.

We would like to thank our staff nurses for their feedback and cooperation. I would like to thank for the last minutes favors they have done for us.

We would like to thank our friends for accepting nothing less than excellence from me. Last but not the least, we would like to thank our families and our parents for supporting us spiritually throughout writing this thesis and our life in general.

ABSTRACT

Background: Needle stick injury has become a major issue among nurses because in a health care working environment there is risk for occupational hazards. Nurses who got a needle stick injury are always at risk of getting HBV, HCV, and HIV that may cause serious illness, or death. **Aim:** The present study is aimed to measure the occurrence of needle stick injuries among nurses, their behavioral practices and evaluation of knowledge regarding needle stick injuries. **Methods:** A descriptive cross-sectional design is used in this research project. A sample of 240 nurses is selected randomly from emergency and different departments of Jinnah Hospital. Students were questioned regarding exposure to needle stick injury throughout their clinical training and measures taken following the exposure. They were also asked to complete the knowledge questionnaire on NSI. **Results:** The study was conducted among 240 nurses of Jinnah hospital Lahore including 58.3% of 18-25 years among which 48% are diploma nurses, 43% are degree and 8% are master's nurses of which 114/240 were those who received training in programs on prevention of needle stick injuries. Maximum NSI 58% are occurred during first year of course. It is observed that 45% nurses are injured during recapping of needles. More injuries (55%) occurred in morning shift. **Conclusion:** The study showed high prevalence of needle stick injuries among nurses. It is concluded that the pressure of work and fatigue are the leading causes of NSIs among nurses. Some nurses do not take needle stick injuries as a serious incidence to be reported, also they do not go for follow up tests that leads to harmful effects on their health. **Recommendations:** It is recommended to arrange training workshops for nurses to make them aware of the needle stick injuries protocols and hospitals policies. It is also recommended that hospital management should seek ways to reduce the workload and pressure from nurses to reduce the occurrence of needle stick injuries.

CONTENT PAGE

KEY WORDS

LIST OF ABBREVIATIONS

DEDICATION

ACKNOWLEDGEMENTS

ABSTRACT

CHAPTER 1:

INTRODUCTION

1.1. INTRODUCTION AND BACKGROUND

1.2. OBJECTIVES

1.3. DEFINITIONS

1.3.1. Personal Protective Equipment

1.3.2. Over burden nurse

1.3.3. Sharps

1.3.4. Lancet needle

1.3.5. Suture needle

1.4. CONCLUSION

CHAPTER 2:

LITERATURE REVIEW

2.1. SUSCEPTIBILITY

2.2. UNIVERSAL PRECAUTIONS

2.3. DOUBLE GLOVING TECHNIQUE

2.4. BARRIERS IN TAKING ACTIONS

2.5. CONCLUSION

CHAPTER 3:

RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

3.2. SETTING

3.3. STUDY PARTICIPANTS

3.4. INCLUSION CRITERIA

3.5. EXCLUSION CRITERIA

3.6. SAMPLE SIZE

3.7. SAMPLING TECHNIQUE

3.8. SAMPLING TOOL

3.9. DATA COLLECTION

3.10. DATA ANALYSIS

3.11. ETHICAL CONSIDERATION

3.12. CONCLUSION

CHAPTER 4:

RESULTS

4.1. DESCRIPTIVE ANALYSIS OF DEMOGRAPHIC VARIABLES

4.2. KNOWLEDGE ASSESSMENT ABOUT NEEDLE STICK INJURIES

4.3. ATTITUDE AND KNOWLEDGE ASSESSMENT OF NURSES ABOUT NSIs

4.4. CONCLUSION

CHAPTER 5:

DISCUSSION

REFERENCE

APPENDICES:

APPENDIX A: PERMISSION LETTER

APPENDIX B: CONSENT FORM

APPENDIX C: QUESTIONNAIRE

© GSJ

Chapter:01

Introduction

Needle stick injuries mean penetrating wounds that are caused by needles which has been in contact with blood, tissue or other body fluids before the exposure, transmitting blood and other hazardous material into the body of health care workers. (Shah, Shah et al. 2015)

While working in health care setups, sharp instruments like needles, lancets, surgical equipment, suture needles contaminated with the blood and body fluids of infected patients containing infectious agents (bacteria, viruses, etc.) poses risk of NSIs for nurses and other healthcare workers. Factors that are associated with increased risk of HIV transmission are deep penetrating wound by sharp object, visible blood or blood products on the device, blood filled needle, patient's high viral load of HIV, HBV and/or HCV. (Punjabi, Banglani et al. 2017)

Even if the serious physiological effects caused by the needle stick injury are insignificant, but the injury can place a patient at increased risk of acquiring blood borne infections including hepatitis B, hepatitis C and HIV. There are many factors that contribute towards NSIs one of the is negligence of the staff during activities such as administering IM injections, blood sampling, needle recapping, disposing needles, manipulating overfilled sharp containers, transferring blood or blood products into collection containers etc. .(Afridi, Kumar et al. 2013)

Other causes of NSIs are overuse of injections and unnecessary sharps, lack of disposable syringes, safer needle devices, and sharps containers, lack of access and failure to use sharps containers immediately after using sharp objects, inadequate or short staffing, recapping of needles after use, lack of engineering controls such as safer needle devices, passing instruments from hand to hand in the operating rooms and lack of awareness and training.

Measures to prevent or reduce the risk of infection transmission among health care workers though occupational exposure include vaccination against HBV, implementation of universal/standard precautions, adherence to the safety measures of sharp handling and disposal such as avoiding recapping of used needles, do not filling sharp containers more than 3/4, use of safety needles, immediately disposing used sharps into puncture proof containers, teaching and training of staff, post exposure prophylaxes for HBV and HIV.

When HCW got a needle stick injury or exposed to blood or body fluid in a health care setting the site should be washed with copious amount of water and soap and allow to bleed the wound, avoid squeezing. The decision about initiating post exposure prophylaxis after NSI should be based on the viral status of source patient and health care worker who got the injury, nature and severity of exposure.

The morbidity and mortality of nurses related to occupational exposures negatively impact the workforce, and quality of care. A worldwide shortage of nurses has observed due to NSI as a major risk for transmission of deadly infectious microbes, poor working conditions, and exposure to carcinogenic chemicals etc.

In developing countries nursing staff are over burden and their salaries are low, as a result skilled staff migrate to other countries like Europe, USA, UAE etc. putting an extra burden upon the remaining staff. The migration of skilled nurses to other countries creates workforce crises in developing countries. This overburdening leads to increased NSI and other health risk upon the staff. Needle stick injuries has become a major health safety concern among nurses after stress. According to a survey of American Nurses Association, 88% nurses think about occupational hazards in health care setting when choosing a new employment.

The avoidance of needle stick injuries is an important aspect of the prevention of blood-borne infection control programs in hospitals. This study directs the important issues of needle stick injuries among nursing professionals and improve and explore their knowledge about various factors and circumstances responsible for needle stick injuries and the measure to prevent NSIs. It aims at improvement in the practice to disposing needles and awareness level of nurses on the issues like segregation of sharps and usage available preventive measures (Muralidhar, Kumar Singh et al. 2010)

1.1 Objectives

The objectives of this study to identify the prevalence of needle stick injury among nurses and their knowledge about NSIs.

1.2 Personal protective equipment:

Personal protective equipment (PPE) is equipment that is used to protect the staff from risks of health and safety at workplace. PPEs include gloves, gown, eye protection (face shield or goggles), and face mask etc.

1.3 Overburden nurse

A nurse attending more than 5 patients in a health care setting in a given time period.

Sharps:

A sharp is any pointed, thin edged object that can cut and pierce through skin.

Lancet needle:

It is a small medical device used for blood sampling from capillaries.

Suture needle:

A curved pointed needle that is used to sew skin or tissues etc.

Conclusion

Needle stick injuries occur when a needle or other sharp instrument contaminated with blood accidentally penetrates the skin. They place a person at risk for acquiring hepatitis B, hepatitis C and HIV. They can occur during drawing sample, administering injection, recapping needles and handling of trash. Effective measures to prevent infections from occupational exposure of nurses include immunization against HBV, eliminating unnecessary injections, implementing Universal Precautions, eliminating needle recapping and use of personal protective equipment, and training workers in the risks and prevention of transmission and post-exposure prophylaxis. Needlestick injury is the top health and safety concern of nurses worldwide, after stress.

Chapter 2:

Literature review

Literature review is defined as broad, comprehensive in depth, systemic and critical review of scholarly publications, unpublished scholarly print materials, audiovisual material and personal communications.

Review of literature is an important, fundamental and continuous process in a research process. Before any research an extensive and thorough study of previous literature is done to help understanding the topic to be researched including advancement in knowledge as well as areas to be researched. One of the positive aspects of literature review is its contribution towards enhancement of knowledge, insight and general scholarship of the researcher.

The literature review will focus on the perception of nurses about needle stick injuries and their attitude towards needle stick injury and how the nurses perceive and behave with regard to the protocols of sharps disposal in health care setting.

2.1: Susceptibility

Nurses are always at risk for acquiring infection from their patients and this risk has become greater due to significantly increased rates of HIV, HBV and HCV infection over the last two decades. (Lachowicz & Matthews, 2009) Nurses in developing countries, are mainly at increased risk of

infections from blood-borne pathogens because of the high occurrence of such pathogens in their communities as well as the lack of personal protective equipment like gloves, goggles and gowns.

2.2: Universal precautions

Universal precautions is a set of practices used to protect health care workers from getting infection and with bacteria and viruses that can be transmitted through blood, body fluids or respiratory droplets and aerosols etc. Universal precautions are applied to all patients irrespective of their disease. Universal precautions include following practices when caring for patients:

- Hand hygiene with soap and water or alcohol-based hand rub after or patient or blood body fluid contact
- Avoiding recapping of used needles
- Disposal of needles and sharps into safe danger boxes after use
- Use of gloves when in contact with blood or body fluid or secretions
- Use of personal protective equipment (gloves, gown face shield) according to need
- Spill management; cleaning spills of body fluids or blood as soon as possible

2.3: Double gloving technique

It is becoming even more important to safeguard patients and reduce the risk of transmission, by using strict measures. Double gloving techniques is one of the strategies introduced to avoid risks of needle stick injuries in nurses.

Series of studies conducted globally shows variation of opinions concerning the frequency of glove failure and the need of wearing two gloves for added protection. (Al-Gethamy, Adetunji et al. 2018). Different studies have shown frequency of needle stick in single gloves ranges from 9 - 41 % while the frequency of needle stick injury in double gloves ranges from 0-9.6%.

2.4: Barriers in taking actions

Barriers are hindrance in complying with the measures. Barriers in taking actions to prevent needle stick injuries among nurses are so many, some of them given as follows: Fatigue, Stress, Workload, Night shifts, Availability of services, Lack of time, Level of education and experience in field. Now safety engineered Needles (needles and sharps designed and manufactured to provide extra

protection and to reduce the risk of injuries and exposure for all nurses) are used to prevent Needle stick injuries in different hospitals.(Karki Thapa 2016)

A study was conducted about usage of safety engineered needles in three Acute care Hospitals in the province of Ontario, Canada over 24 months period (April 2011 to March 2013). The participants were those had previous injury or those that had observed others with needle stick injuries in practice.

Information in the department of occupational health and safety assisted with collection of supporting documents include: Evaluation reports, written policies and procedures, Incident reports, inspection orders, Safety product list, training material and administrative documents from the sharps safety committee. The incidences of needle stick injuries declined as a result of these measures however the injuries continued to occur during activation of device, procedure and disposal of device.(Chambers, Mustard et al. 2015)

Manual safety engineered needles (SEN) was more challenging to activate. It represents the limitation in reducing risk of NSIs and ability of using SENs. There is a lack of control over work environment i.e. not disposing of needles. More bulky design of needle is also a contributor in needle stick injury.

According to (Denny 2013) unpredictable patient interaction or aggressive and non-cooperative patients are the patient factors increases Needle stick injuries. Lack of investment in ongoing review of needle stick injury and efforts to share information with staff. There is limited information about the consequences of needle stick injury to nurses. Fatigue as a barrier to implement new preventive measures to reduce risk of injury. There is lack of time for the nurses to act upon the trainings and safe practices because nurses are fatigued than other Health care Workers because their duty demands long working hours and their job requires to make tough decisions from them which can be emotionally draining, stressfull and psychological fatigue.

Deprivation due to sleep, nurse's exhaustion is on rise due to fatigue causing other health issues such as diet disorder, headache, ulcers and depression. Nurses report disturbance in their personal relationships, reduce work capacity and attitude towards work are all contributors in increased risk of needle stick injury.

2.5: Conclusion

the prevalence of needle stick injuries and sharp injuries is very high in nurses. The most important factor causing needle stick injury are: stress, fatigued, lack of skills not using personal protective equipment during procedure. Safe handling and proper disposal of needles and sharps may prevent needle stick injury. Nurses should get training to fill skill gap, apply universal precautions during procedure.

Chapter three:

Methodology

3.1: Research design

A descriptive cross-sectional research design will be used for this study to assess the evaluation of needle stick injury as an occupational hazard among nurses. Following variables are studied like knowledge, attitude, and behavioral practices.

3.2: Setting

Setting of this study will be emergency and other departments of Jinnah Hospital Lahore.

3.3: Study participants

Study participants are nurses working in different departments of Jinnah Hospital.

3.4: Inclusion criteria

Inclusion criteria includes:

- Age >25
- Professional experience of at least 6 months or above

3.5: Exclusion criteria

exclusion criteria include:

- Paramedics
- Student nurses
- Head nurses
- Specially trained nurses

3.6: Sample size

Sample consists of 240 nurses of Jinnah Hospital.

Sample size for this study is calculated from the solving formula of sampling which is

$$\frac{Z^2_{1-\alpha/2} \times P(1-P)}{d^2}$$

(Lwanga & Lemeshow, 1991)

$Z^2_{1-\alpha/2}$ = for 95% confidence level = 1.96

P = anticipated proportion of knowledge = 20%

d = margin of error = 20 = 9 %

n = sample size = 240

3.7: Sampling technique

Sample is selected by purposive sampling technique.

3.8: Sampling tool

Questioner is used as a sampling tool for data collection.

3.9: Data collection

Data is collected by administration of questionnaire regarding knowledge, attitude and behavioral practice about needle stick injury which include 18 items in questionnaire and 6 in demographic Performa.

3.10: Data analysis

The study yields ordinal quantitative data. Data was analyzed descriptively. Data was entered into SPSS version 21, cleaned, and analyzed. Analysis include frequency counts and conversion of frequency to percentages. First analysis of response for the whole population of participants was carried out. This was followed by analysis of responses for different subgroups to investigate whether there were any differences between the groups.

3.11: Ethical consideration

Participants were informed about the study and a consent explaining the details of the study to be conducted was signed from those who were willing to participate in the study. Confidentiality of identity and data collected from participants was maintained during data analysis.

3.12: Conclusion

In this study a descriptive cross-sectional research design is used to evaluate the knowledge regarding needle stick injury among nurses of Jinnah Hospital in emergency and other departments. Purposive sampling technique is used to collect sample and data is collected by self-administered questionnaire. Data is analyzed by using SPSS version 21. This research is conducted on ethical principles and confidentiality is maintained.

Chapter 4:

Results

4.1: Descriptive analysis of demographic variables

Sr. no.	Demographic information	Data	Frequency	Percentage
1	Age	18-25 years	70	58.3%
		26-35 years	17	14.2%
		36-50 years	16	13.3%
		< 50 years	17	14.2%
2	Qualification	Diploma	57	47.5%
		Degree	52	43.3%
		Masters	9	7.5%
		Specialty	2	1.7%

3	Stay in organization	Up to 5 years	80	67%
		6-10 years	16	13%
		>10 years	24	20%
4	Have you ever received training in the prevention and/or treatment of needle stick injury?	Training received	57	48%

Table 1: descriptive analysis of demographic information including variables as age, qualification, stay in organization and training received on prevention of NSIs program.

The study was conducted among 240 (100%) nurses of Jinnah hospital Lahore including 58.3% of 18-25 years ,14.2% of 26-35 years ,13.3% of 36-50 years and 14.2% more than 50 years of age with 114/240 (48%) were diploma nurses,104/240 (43%) were degree nurses and 9/120 (8%) were masters of which 114/240 were those who received training in programs on prevention of needle stick injuries (Table 1).

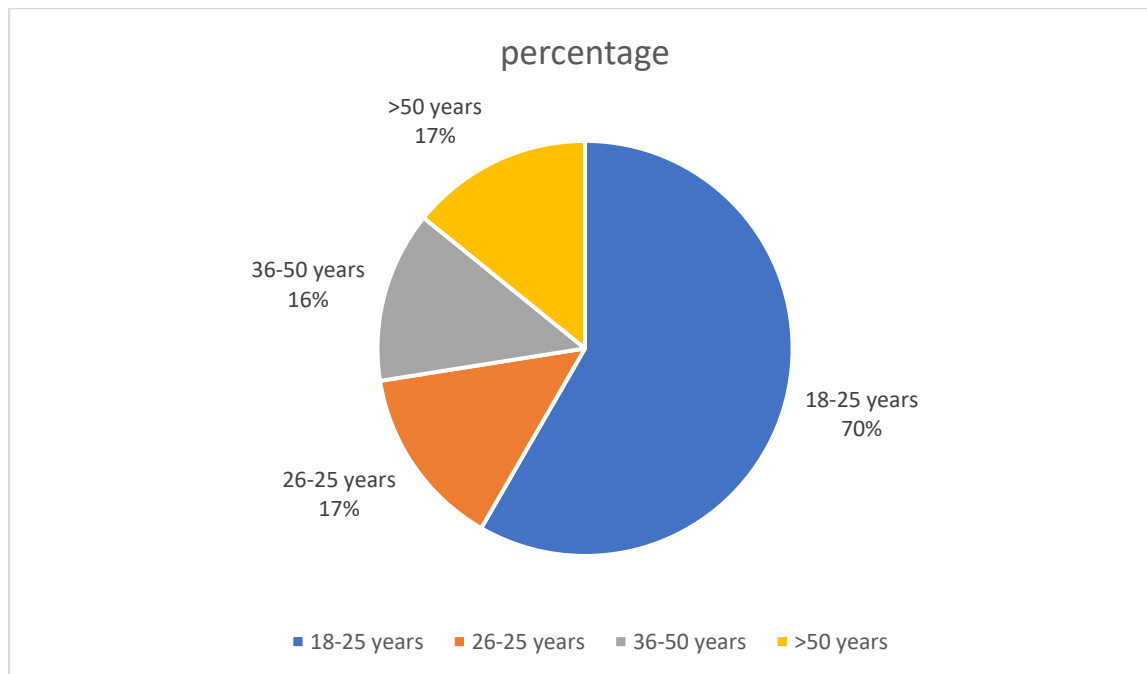


Table4.1.1: pi chart showing %ages of age of participants

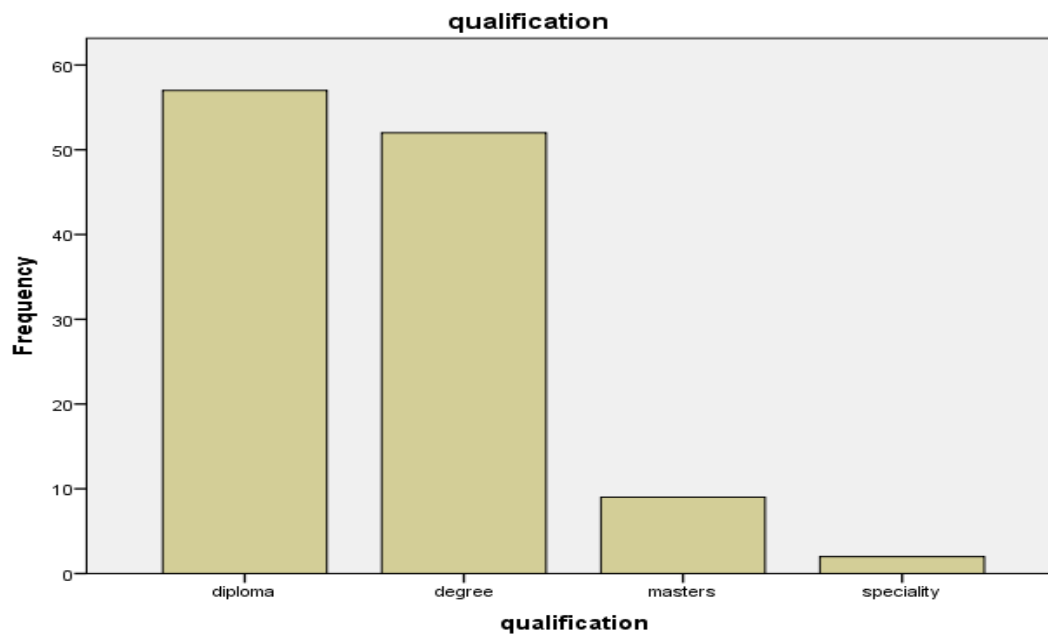


Table 4.1.2: A bar chart showing qualification of the participated candidates.

4.2: Knowledge assessment about needle stick injuries

Sr.Statements no	Mean	Std. Deviation	Average mean
1 Do you think nurses are more prone to NSI?	4.01	1.096	
2 Can NSI be prevented by confidence and skillfulness of the nurse?	3.95	1.011	
3 Do you think improper handling of sharps can lead to infections?	3.88	1.097	
4 Do you think unavailability of personal protective equipment can predispose a person to get NSI?	3.84	.767	
5 Do you think health education may reduce the prevalence of NSI among nurses?	3.78	.997	3.4925
6 Do you think every student is immunized with hepatitis B vaccine?	3.28	1.202	
7 Do you think working shift has nothing to do with increased risk of NSI?	2.88	1.132	
8 Do you think increased work load does not lead to NSI?	2.32	1.085	

Scale: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly agree

In knowledge assessment of nurses about needle stick injuries they agree on the statement that nurses are more prone to needle stick injuries and needle stick injuries can be prevented by confidence and skillfulness of nurses while disagree that increased workload does not lead to needle stick injury. They also agree about the statement that health education may reduce prevalence of NSIs. (Table 2)

4.3: Attitude and knowledge assessment of nurses about NSIs

Sr.no	Statement	Data	Frequency	Percentage
-------	-----------	------	-----------	------------

1	When did you get needle stick injury?	During first year of job	70 50	58% 42%
		After first year of job		
2	Which device caused the injury?	Needles	78	65%
		Surgical equipment	12	10%
		Medical ampule/vial	30	25%
3	Which task were you performing when you get needle stick injury?	Recapping of needles	54 26	45%
		IV cannulation	26	23%
		Injection		27%
4	What was your perception regarding severity of injury?	Severe	41	34%
		Moderate	45	38%
		Mild	34	23%
5	Working shift	Morning	66	55%
		Evening	24	20%
		Night	30	25%
6	What was the condition of safety box in which used needles were discarded?	Overfilled	71	59%
		Torn out	21	18%
		Empty	28	23%
7	What is the final disposal of your waste?	Burn and bury	31	26%
		Incinerator	55	46%
		Open dumping	33	28%

During attitude and knowledge assessment of nurses about needle stick injury we come to know that 58% nurses got injury during first year of job and 42% got after first year of job. 45% nurses got injury while recapping of needles and 23% got during I/V cannulation. Working shift shows 55% injuries are caused in morning shift while on evening shift 20% nurses got injuries.

4.4: Conclusion

The study was conducted among 240 nurses of Jinnah hospital Lahore among which 48% are diploma nurses, 43% are degree and 8% are master's nurses of which 114/240 were those who received training in programs on prevention of needle stick injuries. In knowledge assessment they agree that nurses are more prone to needle stick injuries and it can be avoided through health education. More injuries occur during first year of job while recapping needles and in morning shift.

Chapter 5

Discussion

Discussion

Needle stick injuries are occupational hazard among nurses we conducted our study in different departments of Jinnah hospital Lahore. In our study 58% nurses were up to the age of 25 years while 32% were between 26 to 50 years of age while in another study held in a tertiary care hospital in Japan 51% nurses were 20-29 years old while 30.6% were 30-39.

The study shows 54% NSIs are caused during recapping of needles during handling of the needles 26% nurses reported the injury during injections administration and 26% results show injury while administering I/V cannulation, another study held in a tertiary care hospital of Pakistan shows lower values than ours in which 44.5% injuries caused by recapping of needles 7% during injections and 3% during cannulation.

Needle stick injuries occurred more often during morning shift as compared to other shifts following the reason of high workload and low nurse to patient ratio 55% injuries happen during morning shift and during night shift it is 25%. The results are similar to a study conducted where 57%injuries occur in morning shift and 28% occur working during night shift.

Instruments leading towards the risk of NSIs include needles surgical equipment, vials, I/V cannulas, etc. Needles cause 65% injurie and surgical equipment 10% while in same study mentioned in above paragraph rate of injuries due to needles are seen to be 46% and due to surgical blade, it is 5%. This study results are comparatively lower than our study. The high rate of needles as a cause of injury are due to the fact of low interest of use of protective equipment during normal proceedings.

Results about the severity of injury show that 23% injuries were mild including no deep penetration while injuries with slight deep penetration are moderate with 38% cases while deep injures causes severity are 3.4% the study conducted in a provincial hospital, Kenya shows higher results with mild injuries 67.8% moderate 30% which are almost equal to our study while severe 1.7% which shows higher rate to our study.

Personal protective equipment used for reducing the risk of injuries caused a reduction in NSIs 73% nurses agree with the use of personal protective equipment results in more protection to injuries compared to those who do not use them as shield against unwanted injuries.

Vaccination is a good source to reduce diseases. Immunization against hepatitis B, and C results in pre-protection measures during knowledge assessment it is seen that nurses disagree the fact that all the nurses are vaccinated against hepatitis B while others are vaccinated in study conducted in India shows results of vaccination against hepatitis B 47.5% vaccination against hap. B virus 42% fully vaccinated 30.3 % immunized 69.7% unimmunized.

Workload increases the chances of getting NSIs. Nurses does agree that workload cause increased rate of injuries because of less number of nurses compared to patient ratio in Jinnah hospital therefore there are increased risk of needle stick injuries among nurses. A study conducted in a general hospital of Melaka; Malaysia shows increased workload leads 79.7% injures which justifies the fact earlier discussed.

Like other research, there were some limitations like increased workload which render nurses participating in our research project. Some nurses fill the questionnaire in hurry while some refused due to their heavy work schedule.

It is recommended to have training workshops for nurses to make them aware of the needle stick injuries protocols and hospitals policies. It is also recommended that hospital management should seek ways to reduce the workload and pressure from nurses to reduce the occurrence of needle stick injuries.



References:

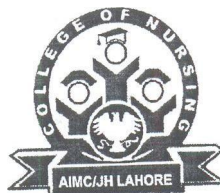
1. Afridi, A. A. K., et al. (2013). "Needle stick injuries–risk and preventive factors: a study among health care workers in tertiary care hospitals in Pakistan." **5**(4): 85.
2. Al-Gethamy, M., et al. (2018). "Investigating Healthcare Workersâ Experience after a Needle Stick Injury at a Tertiary Hospital in Makkah Region in Saudi Arabia: A Qualitative Assessment." **7**(4): 15-21.

3. Amira, C., et al. (2014). "Needle-stick injury among health care workers in hemodialysis units in Nigeria: a multi-center study." **5**(1 January): 228-221-228.
4. Chambers, A., et al. (2015). "Barriers to the adoption of safety-engineered needles Following a regulatory standard: lessons learned from three acute care hospitals." **11**(1): 90.
5. Denny, J. J. B. O. Q. (2013). "Reducing the risk of needlestick injuries in hospital." **2**(2): u586. w511.
6. Karki Thapa, P. (2016). "Strategies for reducing needlestick injuries among healthcare workers: A Literature Review."
7. Muralidhar, S., et al. (2010). "Needle stick injuries among health care workers in a tertiary care hospital of India." **131**(3): 405.
8. Punjabi, S. K., et al. (2017). "Needle stick injuries." **75**: 37.35.
9. Shah, H. D., et al. (2015). "Injection safety and practices following needle stick injuries: an occupational risk to health care providers in Gujarat." **6**(1): 98.

© GSJ

APPENDIX A:

PERMISSION LETTER



OFFICE OF THE PRINCIPAL

COLLEGE OF NURSING ALLAMA IQBAL MEDICAL COLLEGE, LAHORE.

Maulana Shaukat Ali Road, Lahore. Telephone # 99230340, E-mail: conaimc@hotmail.com

No. _____/CON/AIMC, dated Lahore the _____ 2018.

SUBJECT: - Data Collection –Research Project of B.Sc. Nursing Students

Sir,

I hope this letter will find you in the best of health and spirit.

I would be grateful if you would kindly allow our B.Sc. Nursing students Ms. Iram Aslam, Riddah Razzaq Shabana Sarwar to collect data related for approved research project entitled “**needle stick injury as an occupational hazard among nurses**” in collaboration with registered nurses of Jinnah Hospital Lahore.

With warm regards

Principal,
college of nursing,

Allama Iqbal medical college Lahore.



APPENDIX B:

College of Nursing, Allama Iqbal Medical College, Jinnah Hospital Lahore

Consent form

I, _____, daughter/wife of _____, hereby, fully agree to contribute in the above-mentioned study. I understand that the study is designed to add knowledge to nursing. I have been informed about the nature of participation and possible risk/discomfort involved. I have the opportunity to ask any question about the study and I agree to give my response as requested by the researcher (Iram Aslam, Riddah Razzaq, Shabana

Sarwar). I have no objection in case the data obtained from my investigation is published in research publication while maintaining confidentiality.

Researchers

Participant

© GSJ

APPENDIX C:

Evaluation Needle stick injury as an occupational hazard among Nurses in Jinnah Hospital

PART 1: PERSONAL AND JOB INFORMATION

Department: _____

Age

1. ☐ 18-25years

2. ☐ 26-35years

3. ☐ 6-50years

4. ☐ < 50years

Qualification

- | | |
|-------------------------------------|---------------------------------------|
| 1. <input type="checkbox"/> Diploma | 2. <input type="checkbox"/> Degree |
| 3. <input type="checkbox"/> Masters | 4. <input type="checkbox"/> Specialty |

Stay in Organization

- | | |
|---|--|
| 1. <input type="checkbox"/> Less than 1 years | 2. <input type="checkbox"/> 1-5 years |
| 3. <input type="checkbox"/> 6-10 years | 4. <input type="checkbox"/> above 10 years |

Have you ever received training in the prevention and/or treatment of needlestick injury?

- | | |
|---------------------------------|--------------------------------|
| 1. <input type="checkbox"/> Yes | 2. <input type="checkbox"/> NO |
|---------------------------------|--------------------------------|

© GSJ

PART 02

Please tick (✓) the appropriate answer:

1. When did you get Needle stick injury (NSI)?
 1. ☐ During 1st year of job
 2. ☐ After 1st year of job
2. Which device caused the injury?
 1. ☐ Needles
 2. ☐ Surgical equipment
 3. ☐ Medication ampoule/vial
3. Which task were you performing when you get needle stick injury?
 - ☐ Recapping of needles

- ☐ Injection
- ☐ I/V cannulation
4. What was your perception regarding severity of injury?
- ☐ Severe
- ☐ Moderate
- ☐ Superficial
5. Working shift
- ☐ Morning
- ☐ Evening
- ☐ Night
6. What was the condition of safety box in which used needles were discarded?
- ☐ Overfilled
- ☐ Torn out
- ☐ Empty
7. What is the final disposal of your sharp waste?
- ☐ Burn and burry
- ☐ Incinerator
- ☐ Open dumping

BEHAVIORAL ASSESSMENT OF NURSES REGARDING NEEDLESTICK INJURIES

Below is a series of statements for helping your judgements about needle stick injuries. Please tick(✓) the most appropriate option regarding your opinion.

Strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5.

Sr. no.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
1.	Do you think nurses are more prone to NSI?					
2.	Do you think increased workload does not lead to NSI?					

3.	Do you think improper handling of sharps can lead to infections?					
4.	Can NSI be prevented by confidence and skillfulness of the nurse?					
5.	Do you think unavailability of personal protective equipment can predispose a person to get NSI?					
6.	Do you think every student is immunized with hepatitis B vaccine?					
7.	Do you think health education may reduce the prevalence of NSI among nurses?					
8.	Do you think working shift has nothing to do with increased risk of NSI?					

© GSJ